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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/749,446	12/31/2003	Rajnish Batlaw	5343B	9821

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07/08/2005

William S. Parks
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EXAMINER

SHOSHO, CALLIE E

ART UNIT

PAPER NUMBER

1714

DATE MAILED: 07/08/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10749,446

Applicant(s)

BATLAW, RAJNISH

Examiner

Callie E. Shosho

Art Unit

1714

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 22 April 2005.
2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,2,5,6,9 and 10 is/are pending in the application.
4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5) ☐ Claim(s) _____ is/are allowed.
6) ☒ Claim(s) 1,2,5,6,9 and 10 is/are rejected.
7) ☐ Claim(s) _____ is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 4/22/05 has been entered.

2. All outstanding rejections are overcome by applicant's amendment filed 4/22/05.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.

4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

4. Claims 1-2, 5-6, and 9-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Harris et al. (U.S. 5,886,091) in view of Baumgartner et al. (U.S. 4,812,141) and pears et al. (U.S. 6,632,858).

Harris et al. disclose gravure ink comprising black pigment, solvent such as toluene, resin, and polymeric colorant, i.e. colored polyurethane obtained from polyoxyalkylene containing chromophore (col.3, lines 3-5, 31, 40-43 and 46-49, col.4, lines 10-25 and 62-65, and col.5, lines 19-20 and 41-62).

The difference between Harris et al. and the present claimed invention is the requirement in the claims of specific type of polymeric colorant.

Harris et al. disclose colored polyurethane obtained from polyoxyalkylene containing chromophore but does not disclose specific polyoxyalkylene containing chromophore as presently claimed.

Baumgartner et al., which is drawn to gravure ink, disclose the use of colored thermoplastic resin that comprises colorant in the form of alkyleneoxy substituted chromophore wherein the chromophore is nonionic and the polyoxyalkylene chains contain ratio of polypropyleneoxy to polyethyleneoxy of, for instance, 3:1 or 4:1. The motivation for using such colorant is to reduce color migration (col.1, lines 10-15 and 59-64, col.3, line 55-col.4, line 50, Table 9, and Example 27).

However, there is no disclosure in Baumgartner et al. of benzodifuranone chromophore as presently claimed. Rather, Baumgartner et al. disclose the use of azo, anthraquinone, or indigoid chromophore.

Pears et al., which is drawn to ink, disclose the use of colored polyurethane that is obtained from chromophore including benzodifuranone. Further, Pears et al. disclose the equivalence and interchangeability of using azo, anthraquinone, or indigoid chromophore as disclosed by Baumgartner et al. with using benzodifuranone chromophore as presently claimed in order to produce colored polyurethane of various colors (col.1, lines 30-40 and col.3, lines 47-50, 60-61 and 66 and col.3, line 67-col.4, line 1).

Given that the combination of Baumgartner et al. and Pears et al. disclose colorant including same type of chromophore and same types and amount of polyoxyalkylene chains as presently claimed, it is clear that such colorant would intrinsically exhibit maximum absorption as presently claimed.

In light of the above, it therefore would have been obvious to one of ordinary skill in the art to use alkyleneoxy substituted benzodifuranone chromophore wherein the polyoxyalkylene chains contain ratio of polypropyleneoxy to polyethyleneoxy of, for instance, 3:1 or 4:1 in Harris et al. in order to produce ink with desired color that exhibits reduced color migration and thereby arrive at the claimed invention.

5. Claims 1-2, 5-6, and 9-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Harris et al. (U.S. 5,886,091) in view of Connor et al. (U.S. 6,566,425).

Harris et al. disclose gravure ink comprising black pigment, solvent such as toluene, resin, and polymeric colorant, i.e. colored polyurethane obtained from polyoxyalkylene containing chromophore (col.3, lines 3-5, 31, 40-43 and 46-49, col.4, lines 10-25 and 62-65, and col.5, lines 19-20 and 41-62).

The difference between Harris et al. and the present claimed invention is the requirement in the claims of specific type of polymeric colorant.

Harris et al. disclose colored polyurethane obtained from polyoxyalkylene containing chromophore but does not disclose specific polyoxyalkylene containing chromophore as presently claimed.

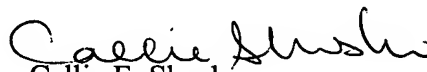
Connor et al. disclose the use of colored polymer such as colored polyurethane that is suitable for use in inks and comprises colorant in the form of alkyleneoxy substituted benzodifuranone wherein the polyoxyalkylene chains contain ratio of polyethyleneoxy to polypropyleneoxy of, for instance, 1:1.3 or 1:2. Attention is drawn to example 1 that discloses colorant possessing λ_{\max} of 556 nm and example 3 that discloses colorant possessing λ_{\max} of 577 nm. The motivation for using such colorant is to impart high color strength and high heat stability (col.1, lines 8-13, col.3, lines 9-18, col.3, line 40-col.4, line 1, col.7, lines 64-65, col.8, lines 13-17, and col.16, lines 48-49).

In light of the motivation for using specific polyoxyalkylene containing chromophore disclosed by Connor et al. as described above, it therefore would have been obvious to one of ordinary skill in the art to use such polyoxyalkylene containing chromophore in Harris et al. in order to produce ink with high color strength and high heat stability, and thereby arrive at the claimed invention.

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Callie E. Shosho whose telephone number is 571-272-1123. The examiner can normally be reached on Monday-Friday (6:30-4:00) Alternate Fridays Off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vasu Jagannathan can be reached on 571-272-1119. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Callie E. Shosho
Primary Examiner
Art Unit 1714

CS
7/1/05